

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

**Queen's University at Kingston and  
PARTEQ Research and Development  
Innovations,**

**Plaintiffs,**

**v.**

**Samsung Electronics Co., Ltd., *et al.***

**Defendants.**

**Civil Action No. 2:14-cv-00053-JRG-  
RSP**

**DEFENDANTS' RESPONSIVE CLAIM CONSTRUCTION BRIEF**

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Exhibit No.	Document
1	Declaration of Margrit Betke, Ph.D. (“Betke Decl.”)
2	Excerpts from File History 7,762,665
3	Excerpts from File History 8,322,856
4	US Patent 6,001,065 (DeVito)

Defendants Samsung Electronics Co., Ltd., and Samsung Electronics America, Inc., (collectively, “Samsung”) hereby submit their responsive claim construction brief regarding the disputed claim terms of the Patents-in-Suit.<sup>1</sup>

## **I. Introduction**

The Patents-in-Suit generally relate to methods and systems “for communication between humans and devices.” *See, e.g.*, ’665 patent at Title. The noted problem that the Patents-in-Suit sought to solve was that “electronic devices that require user input or attention do not follow ... social rules in communicating with users. As a result they often generate intrusive and annoying interruptions.” *Id.* at 4:53-56. Recognizing well-known aspects of effective human communication that “initiators of conversations often wait for visual cues of attention, in particular, the establishment of eye contact, before launching into their conversation,” the Patents-in-Suit use an “‘attentive user interface’ ... that senses ... and negotiates for a user’s attention by sensing one or more indices of a user’s attentive state (*e.g.*, eye contact, eye movement, eye position, eye gaze direction, voice, body presence, body orientation, head and/or face orientation, activity, brain activity/arousal).” *See id.* at 5:13-18, 5:44-53. The disclosed invention therefore generally requires that a device: (1) sense indicia of a user’s attention (*e.g.*, sensing eye contact or movement) toward the device; (2) process that sensed indicia to determine the user’s “attentive state”; and (3) modulate, based on the user’s attentive state, an operation that is initiated by the device, and that provides notifications, information, or communication to the user based on the user’s attention.

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<sup>1</sup> U.S. Patent Nos. 7,762,665 (the “’665 patent”), 8,096,660 (the “’660 patent”), 8,322,856 (the “’856 patent”), and 8,672,482 (the “’482 patent”).

Samsung's proposed constructions directly address the terms at issue with support from the intrinsic and extrinsic record. Plaintiffs, in contrast, either proffer constructions that not are grounded in the intrinsic record or avoid altogether the actual dispute.

Further, several of the disputed claim terms are indefinite, namely "attention" and "initiated by the device." The record fails to provide any guidance, much less sufficient guidance, to understand the scope of the "attention" term with reasonable certainty. The Plaintiffs' apparent explanation is that claimed devices actually determine whether the user is "paying attention" or "detecting one's happiness rather than just his smile." *See* Plfs.' Opening Brief, Dkt. No. 69 ("Plfs.' Br."), at 2; Plfs.' Opp. to Defs.' Mot. for Judgment on the Pleadings, Dkt. No. 70 ("Plfs.' Opp.") at 1. In other words, Plaintiffs appear to contend that the recited "attention" calls determining the actual state of mind of the user, which is without objective boundaries and unquestionably beyond the disclosure of the Patents-in-Suit. Similarly, one of ordinary skill would not reasonably ascertain the scope of the term "initiated by the device" or meaningfully distinguish it from another term also used in the intrinsic record, "initiated by the user."

## **II. Applicable Legal Principles**

The words of a patent claim "are generally given their ordinary and customary meaning." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (citations omitted). This is the meaning they would have to a person of ordinary skill in the art at the time of the invention and in view of the intrinsic evidence, *i.e.*, the claims, the specification, and the prosecution history. *Id.* at 1313. "The construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction." *Id.* at 1316 (quoting *Renishaw PLC v. Marposs Societa per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998)). The specification "is always highly relevant to the claim construction analysis."

*Phillips*, 415 F.3d at 1315. It is “the single best guide to the meaning of a disputed term” and is usually “dispositive.” *Id.*

Indefiniteness is a question of law for the Court to decide. *IPXL Holdings, LLC v. Amazon.com, Inc.*, 430 F.3d 1377, 1380 (Fed. Cir. 2005). A claim is indefinite if, when viewed in light of the intrinsic evidence, it fails to “inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014). A patent claim may also be indefinite if “it would be apparent to one of skill in the art, based on the specification, that the invention set forth in a claim is not what the patentee regarded as his invention.” *Allen Eng'g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1349 (Fed. Cir. 2002).

The Federal Circuit has since applied *Nautilus* to hold that, to be definite, “the claims, when read in light of the specification and the prosecution history, must provide objective boundaries for those of skill in the art.” *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1371 (Fed. Cir. 2014). “[A] patent does not satisfy the definiteness requirement of § 112 merely because a court can ascribe *some* meaning to a patent’s claims.” *Id.* (citing *Nautilus*, 134 S. Ct. at 2130) (emphasis in original). Rather, “a term of degree fails to provide sufficient notice of its scope if it depends on the unpredictable vagaries of any one person’s opinion.” *Id.* (quoting *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1350 (Fed. Cir. 2005)). “If the claim language might mean several different things and no informed and confident choice is available among the contending definitions,” then the claim is indefinite. *Id.* (citing *Nautilus*, 134 S. Ct. at 2130 n.8).

### III. Disputed Terms

#### A. “attention”

<b><u>Term</u></b>	<b><u>Samsung’s Construction</u></b>	<b><u>Plaintiffs’ Construction</u></b>
“attention”	Indefinite	“engagement with or toward a subject”
“sensing attention of a user”	Indefinite	<i>See</i> construction for “attention.” No further construction necessary.
“wherein sensing attention comprises sensing one or more indices selected from the group consisting of ...user activity”	Indefinite	<i>See</i> constructions for “attention” and “measure or index.” No further construction necessary.

The dispute regarding each of the foregoing limitations is the term “attention” itself. This term is unsupported by the specification. It leaves one of ordinary skill in the art unable to reasonably ascertain its boundaries. Therefore, it is indefinite. *See Nautilus*, 134 S. Ct. at 2124; *see also Allen*, 299 F.3d at 1349 (“Where it would be apparent to one of skill in the art, based on the specification, that the invention set forth in a claim is not what the patentee regarded as his invention, we must hold that claim invalid under § 112, paragraph 2.”)

The specification generally discloses: (1) observable indicia of user’s attention (*e.g.*, eye contact, eye movement, eye position, eye gaze direction, voice, body presence, body orientation, head and/or face orientation, activity, brain activity/arousal) (*see* ’665 patent at, *e.g.*, at 5:13-17); (2) “attentive state” or “measure or index of a user’s attention” (*see* ’665 patent, at *e.g.*, 6:3-8); and (3) a user’s actual “attention.” (*see* ’665 patent, at *e.g.*, 1:21-22, 4:29-31, 4:53-54). Each of the foregoing are directed to different concepts. The first and second uses are reasonably understandable to one of ordinary skill. Declaration of Margrit Betke, Ph.D. (“Betke Decl.”) at ¶¶ 27-28. Observable indicia of a user’s attentive state and ways to acquire such data were well-known. *Id.* For example, as admitted by the patentees, it was well-known in the art to use voice,



eye gaze direction, and body presence. *See* '665 patent at 1:26-28; 5:26-28; 9:21-22 (“In other embodiments an attentive user interface uses eye gaze direction ... detected by an eye tracker, such as that described in detail in U.S. Pat. No. 6,152,563 to Hutchinson *et al.*”). In view of the specification, one of ordinary skill would also know that such measures, information, or indices may be quantified reflecting the “attentive state” of a user as a “measure or index of a user’s engagement with or attention toward a subject.” ’665 patent at 6:3-5. Betke Decl. at ¶ 29.

The third use, “attention” is not reasonably ascertainable, and understandably so. As argued by Plaintiffs, the user’s “attention” is not the “physical indicia of the user’s engagement,” but the “engagement itself,” or, “detecting one’s happiness rather than just his smile.” Pltfs.’ Br. at 2. One’s state of “happiness,” like his “attention,” is beyond what can be observed, measured, or calculated. Betke Decl. at ¶¶ 30-33. At best, one can obtain an approximation of the user’s attention toward the device. *Id.* But, as argued by Plaintiffs, they did not claim that. Plaintiffs claimed a device that can detect the user’s actual state of mind. *See* Pltfs.’ Br. at 2 (“...the device would assess the *user’s actual engagement* with or toward the subject, rather than the raw physical indicia of that engagement alone, a minute distinction akin to the difference between *detecting one’s happiness rather than just his smile.*”). Defendants agree—the “attention” in the claims is like detecting “happiness.” The issue is that this definition—whether framed as “attention” or “engagement”—requires “detecting” *actual* “happiness” rather than the *observable indicia* of “happiness.”

To the extent that Plaintiffs suggest that the scope of “attention” and “attentive state” are “precise enough” under *Nautilus* to save the claims, that argument should be rejected. *See Nautilus, Inc.* 134 S. Ct. at 2129; Pltfs.’ Br. at 3. During prosecution of the ’665 patent, and in response to a Section 102 rejection, the patentees replaced “attentive state” with “attention” in

the claims and stated, “[the prior art] is plainly different from the invention currently claimed in claim 1.” Dec. 11, 2009 Reply to Office Action, ’665 File History, at 8.<sup>2</sup> In addition, the specification confirms the terms mean different things, as they are used differently. For example, the specification states:

the term “attentive user interface” is intended to mean any hardware and/or software that...negotiates (sic) a ***user’s attention*** by sensing one or more indices of a ***user’s attentive state*** (e.g., eye contact....

’665 patent at 5:44-47 (emphasis added). The patentee purposefully replaced the term “attentive state” with “attention” by amendment. That this amendment results in a finding of indefiniteness is irrelevant—the patentee introduced this ambiguous term. *See Allen Eng’g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1349 (Fed. Cir. 2002) (“It is not our function to rewrite claims to preserve their validity.”) *citing Rhine v. Casio, Inc.*, 183 F.3d 1342, 1345 (Fed. Cir. 1999).

Accordingly, because the term “attention” has no reasonably definable scope, the claims in which the term occurs are invalid.

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<sup>2</sup> Plaintiffs suggest that the amendment was made for “greater clarity.” Pltfs.’ Br. at 2. To the contrary, “attentive state” is defined in the specification and “attention” is not. *See* ’665 patent at 6:3-8; *see also* Oct. 15, 2008 Reply to Office Action, ’665 File History, at 9 (referring examiner to definition of “attentive state.”).

**B. “initiated by the device”****i. “initiated by the device” is indefinite.**

<b>Term</b>	<b>Samsung’s Construction</b>	<b>Plaintiffs’ Construction</b>
“wherein the operation that is modulated is initiated by the device”	Indefinite. Alternatively, “wherein the operation that is modulated is initiated by the device based on an information event and without explicit or implicit user input”	<i>See</i> construction for “modulated” and “operation of the device.” No further construction necessary.
“wherein the outputting information is initiated by the device”	Indefinite. Alternatively, “wherein the outputting information is initiated by the device based on an information event and without explicit or implicit user input”	No construction necessary.

The asserted claims require that an operation is “initiated by the device.” As the intrinsic record fails to provide any meaningful guidance to reasonably ascertain the scope of the term, it is indefinite. As an initial matter, although the asserted claims are directed to device-initiated devices, the specification discloses *both* device-initiated and user-initiated devices. ’665 patent at 9:25-28. Indeed, the specification states that “the invention may be applied to user-initiated control of a device ....” *Id.* at 9:25-26; *see also* 1:9-12 (“this invention relates to ... device or subject initiated communications.”). The specification, however, does not sufficiently define or distinguish these two types of devices. For example, even though the specification explicitly purports to identify several “user-initiated” prior art patents/systems (’665 patent, 1:26-63) and two device-initiated embodiments (’665 patent, 9:25-51), at least eight embodiments are not expressly characterized as either “user-initiated” or “device-initiated” (’665 patent, 12:15-21:21). Moreover, viewed as a whole, the disclosure does not provide sufficient guidance to distinguish “device-initiated” devices from “user-initiated” devices. Betke Decl. at ¶¶ 38-42.

Nevertheless, Plaintiffs contend without support that “initiated by the device” is “clear in light of the juxtaposition of user- and device-initiated communications throughout the

specification...” and that “skilled artisans would have understood the term to refer to device-initiated communications as opposed to user- or human-initiated communications.” Plfs.’ Br. at 8. Plaintiffs’ brief does not, however, identify a single such juxtaposition. Instead, Plaintiffs appear to propose defining “device initiated” by negation: “device initiated” is whatever “user initiated” is not.

The one problem with this approach is that “user initiated” is not clearly defined. First, the “user-initiated” prior art patents disclosed in the specification of the Patents-in-Suit provide no meaningful guidance. For example, these “user-initiated” prior art patents teach devices that mirror certain embodiments disclosed in the Patents-in-Suit and functionality that Plaintiffs have accused as “device-initiated” in this litigation. To illustrate, U.S. Pat. No. 6,393,136 to Amir *et al.* (“Amir”), discloses several applications of an eye contact sensor:

“The output of eye contact (or no eye contact)...may be used in many different ways...As another example, the output may be provided to a computer, television, VCR, or other appliance for use in operating a screen saver or other power-saving feature. ***Here, the computer can selectively activate its components when the subject is looking at the computer, or deactivate components when the subject looks away for several minutes.***”

Amir at 9:61-67 (emphasis added). This Amir disclosure is identical to the disclosed “Audio/Visual Applications” embodiment in the specification of the Patents-in-Suit. *See* ’665 patent at 15:11-14. In the Audio/Visual embodiment, “televisions and other audiovisual content delivery systems can be augmented with eye contact sensors ***to determine whether that content is being viewed, and to take appropriate action when it is no longer viewed.***” ’665 Patent, 15:5-29 (emphasis added). In both this embodiment of the Patents-in-Suit and Amir, the computer augmented with eye-contact sensors acts based on whether the content is being viewed. Accordingly, one could not reasonably ascertain the difference between the “user-initiated” Amir

patent and the Audio/Visual embodiment, and could not put any “objective boundary” on the scope of the claims. Betke Decl. at ¶¶ 40-42.

The prosecution history does not help draw the line between “device-” and “user-initiated.” Betke Decl. at ¶¶ 44-47. During prosecution, the patentees distinguished the prior art based on the claimed “initiated by the device.” *See* Amendment & Reply to Office Action, ’856 File History, at 7-9. One such prior art reference was De Vito, U.S. Patent No. 6,001,065, which is directed to using bioelectrical signals such as EEG and EMG signals for passive and active user inputs to various electronic media such as video games, movies, music, virtual reality, and computer animations. *See* De Vito at Abstract. Regarding the differences between the claimed invention and De Vito, the patentees stated, “De Vito is based *entirely* on systems wherein an outputting of information is *effected in response to user input*. That is, De Vito provides systems wherein outputting of information is *initiated by the user*.” *Id.* (emphasis added). In other words, patentees equate outputting information effected in response to *user input* as outputting information *initiated by the user*.

The patentees, however, did not expressly address the De Vito’s *passive user inputs*, which are similar to sensing attention in the Patents-in-Suit. Particularly, it is not clear how these passive user inputs (*e.g.*, the emotional reaction of the viewer to a scene in a movie), which control or modulate what scene is next played in De Vito, would not be the same as indicia of user attention, which modulate or control an operation in the claimed devices of the Patents-in-Suit.<sup>3</sup>

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<sup>3</sup> The specification makes clear that the indicia of user attention is based on user input such as eye contact and eye gaze. *See, e.g.*, ’665 patent at 1:26-28 (voice and/or eye contact are

ii. **Alternatively, “initiated by the device” means initiated “based on an information event and without explicit or implicit user input.”**

To the extent the Court concludes that “initiated by the device” is amenable to construction, Samsung’s proposed alternative construction is the only construction that is consistent with the entire intrinsic record and provides objective bounds on the claims. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005) (the specification “is the single best guide to the meaning of a disputed term.”). Specifically, an operation “initiated by the device” must be initiated “based on an information event and without explicit or implicit user input.”

The “information event” aspect of Samsung’s construction comes from Figure 3 of the specification, the only embodiment in the specification that is explicitly identified as “device-initiated.” *See* ’665 patent at 9:28-38. The specification states:

the invention is particularly applicable to *device-initiated* communication with a user, such as, for example, *notifying a user of an incoming message*, or of *a task requiring user input*.

’665 patent at 9:28-31 (emphasis added). And “[a]s shown in in [Figure] 3, an attentive user interface, running on a (sic) such a device, senses and evaluates one or more indices of user attention (*e.g.*, eye contact, eye movement...) to determine whether, when, and how to notify, interrupt, respond or respond (sic) to the user...”). ’665 patent at 9:32-38. Figure 3 makes explicit reference to an “information event.” Therefore, device-initiated operations have to be based on an information event—an event that is *only known to the device* and *not the user*. Betke Decl. at ¶ 58. Moreover, one of skill in the art would understand that the examples of device-initiated communications provided in the specification, *e.g.*, an incoming email message

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user input); 9:21-24 (eye gaze direction is input); 9:25-28 (eye contact/eye gaze are user input); 6:3-8 (defining “attentive state” as based on indices such as eye contact/eye gaze direction).

or a task requiring user input, are examples of “information events,” which form the basis of the operation initiated by the device. *Id.*

The “without implicit or explicit user input” aspect of Samsung’s construction is supported by the prosecution history. As explained above, Plaintiffs distinguished the prior art during prosecution based on the “initiated by the device” limitation. *See* Amendment & Reply to Office Action, ’856 File History, at 7-9. In doing so, Plaintiffs stated that in “user initiated” systems, outputting of information is “effected in response to user input.” *Id.* (“De Vito is based *entirely* on systems wherein an outputting information is *effected in response to user input*. That is, De Vito provides systems wherein outputting information is *initiated by the user*.”) (emphasis added). Alone, the words, “without implicit or explicit user input” would be insufficient to delineate “device-initiated” from “user-initiated,” but in combination with “information event,” Samsung’s construction properly captures the scope of an operation that is initiated by the device—*i.e.*, an operation that is initiated by the device is based on an information event and without explicit or implicit user input.<sup>4</sup>

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<sup>4</sup> The addition of the words “explicit or implicit” in Samsung’s construction ensures that the scope of the claim does not turn on the state of mind of the user. According to the prosecution history, if the device operation is initiated in response to any user activity, whether that activity is intentional or not, the response is “initiated by the user.” A contrary result would be unworkable because, in that case, the claim would require an inquiry into the state of mind of the user. Such an inquiry would be without objective boundaries and, in this instance, without any support in the intrinsic record. *See Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1371 (Fed. Cir. 2014)(“The claims, when read in light of the specification and the prosecution history, must provide objective boundaries for those of skill in the art.”).

Plaintiffs dismiss Samsung's construction by stating that "the invention modulates the device's operations based on the user's attention toward the device, not on some broad notion of "information event" and not on a lack of "explicit or implicit user input...." Pltfs.' Br. at 7 (emphasis added). This misses the mark. Samsung does not dispute that the claimed invention require both: (1) an operation that is "initiated by the device"; and (2) modulating that operation based on the user's "attention." The dispute, which Plaintiffs fail to address, is what constitutes an operation "initiated by the device."

Although Plaintiffs have not proffered a construction of this term, they appear to suggest that *any* device which modulates its operations based on the user's attention/input is a "device-initiated" type of device. *See* Plfs.' Br. at 7 ("The invention modulates the devices' operations based on the user's attention toward the device...."); *id.* at 6 ("During prosecution, the patentee specifically distinguished the claimed invention from prior art on the ground that it modulated the device's operation on the basis of the user's attention toward the device."); Plfs.' Opp. Br. at 13 ("the solution is a method for enabling computers to sense whether a user is paying attention then self-modulate accordingly"); *id.* at 1-2 ("At the most basic level, the patents employ sensors that detect certain physical signs that a person is paying attention to a computer, convert information derived from those sensors into a signal, then use that signal to alter the computer's operations on the basis of the person's attention."). As discussed above, this is directly at odds with the prosecution history and specification; user-initiated devices also modulate operations based on the user's attention toward the device. *See* '665 patent at 9:25-26 ("An attentive user interface of the invention may be applied to user-initiated control of a device..."); *id.* 1:26-30 (One way that human-device interactions can be improved is by employing user input such as



voice and/or eye contact, movement, or position to allow users to control the device.”); *see also* 1:8-12.

By contrast, Samsung’s construction articulates the only reasonable and supportable distinction between device-initiated and user-initiated devices. These operations must be based on an “information event and without implicit or explicit user input.” This is consistent with the specification and provides objective boundaries on the scope of the claims to one of ordinary skill. Accordingly, to the extent the Court concludes that “initiated by the device” is amenable to construction, Samsung’s construction should be adopted.

**C. “operation of the device”**

<u><b>Term</b></u>	<u><b>Samsung’s Construction</b></u>	<u><b>Plaintiffs’ Construction</b></u>
“operation of the device”	<i>See</i> defendants’ proposed construction for “modulating operation of the device” “wherein operation of the device is modulated” and “controlling operation of the device”	“actions of a computer program on the device”

The term “operation of the device” should be afforded its plain and ordinary meaning. This meaning would include both hardware and software operations. Plaintiffs’ proposed construction improperly limits the recited “operation” to a ***computer program action***. There is no basis for such a limitation. First, there is nothing in the claims that limits the “operation of the device” to be “***actions of a computer program*** on the device” as proposed by Plaintiffs. The claims merely require “operation of the device.” Second, the Plaintiffs construction is contrary to the specification. Indeed, the specification supports that the alleged invention may be applied to “any hardware and/or software.” *See* ’665 patent, at 5:44-45. Betke Decl. at ¶¶ 61-63. More specifically, the specification provides an illustrative list of operations that may be modulated,

including “said operation that is modulated may comprise notification, communication, information transfer...” – nothing about it being limited to software operation. Therefore, Plaintiffs’ suggestion that these are operations can only be performed by computer programs is inconsistent with the intrinsic evidence and so should be rejected. Betke Decl. at ¶¶ 61-63.

**D. “modulating operation of the device” / “wherein operation of the device is modulated” / “controlling operation of the device”**

<b><u>Term</u></b>	<b><u>Samsung’s Position</u></b>	<b><u>Plaintiffs’ Position</u></b>
“modulating operation of the device / wherein operation of the device is modulated”	“modulating an initiated operation of the device” “wherein an initiated operation of the device is modulated”	<i>See</i> construction for “modulating/modulated” and “operation of the device.” No further construction necessary.
“controlling operation of the device”	“controlling an initiated operation of the device”	<i>See</i> construction for “operation of the device.” No further construction necessary.

The key dispute with respect to these terms is whether “modulate” means the same thing as “initiate.” They do not, and the language of the claims makes this clear. For example, illustrative claim 1 of ’665 patent (in pertinent part) requires:

wherein *the operation* that is [1] *modulated* is [2] *initiated* by the device....

’665 patent, 21:60 (emphasis added). Plainly, the adverbs “modulated” and “initiated” are different and separate. Properly construed in the context of the claim, the recited operation is *both* “initiated” and “modulated” by the device, but modulation occurs in response to user attention/input. *See Applied Med. Res. Corp. v. U.S. Surgical Corp.*, 448 F.3d 1324, 1333 n. 3 (Fed. Cir. 2006) (“[T]he use of two terms in a claim requires that they connote different meanings....”). The same can be said for the “controlling” term. For example, in asserted claim 1 of the ’856 patent:

A method of *controlling operation* of a device... wherein the *controlling operation* includes determining whether to output information to the user... wherein *the outputting information is initiated* by the device.

'856 patent at 21:57-22:4 (emphasis added). Although “controlling operation” refers to the control of an “initiated” operation (*i.e.*, the outputting information) it is clearly different and separate from this “initiated” operation.

The specification also repeatedly states that the object of the invention was to make the interruptive and annoying device-initiated communications conform to basic social rules. *See, e.g.*, '665 patent at 4:53-56. To do this, otherwise interruptive or “initiated” operations were modulated/controlled based on these social rules. *See, e.g.*, 5:4-6 (“Thus, an attentive user interface according to the invention applies such social rules to device-initiated interactions or communications....”). This modulation included, for example, determining whether, when, and how to notify (*e.g.*, interrupt the user). '665 patent at 5:4-9.

Samsung’s construction merely seeks to clarify that an *initiated* operation of the device is *modulated*. Plaintiffs argue that adding the words “an initiated” into these limitations is meaningless, redundant, or contradictory (Plfs.’ Br. at 10-11), but for the reasons explained above, adding the words “an initiated” adds much needed clarity to the scope of the claims. Plaintiffs further state that “if Defendants’ addition of the word ‘initiated’ would somehow limit the device’s application to operations that are already in progress, that limitation contradicts the express language regarding operations ‘initiated by the device.’” Plfs.’ Br. at 11. Plaintiffs provide, however, no explanation of why. As explained above, Defendants’ construction is supported by the claims and the specification. Indeed, the entire specification is consistent with this notion—operations *initiated* by the device had to be *modulated* according to basic social

rules. Betke Decl. at ¶¶ 65-69. The patentees’ alleged invention is not a new “device-initiated” operation, but an allegedly new way of modulating old device-initiated operations.

**E. “user state signal”**

<b><u>Term</u></b>	<b><u>Samsung’s Construction</u></b>	<b><u>Plaintiffs’ Construction</u></b>
“processing the sensor signal to produce a user state signal that is indicative of user attention toward a screen of the device”	Indefinite	<i>See</i> construction for “attention” and alternative construction for “user state signal.” No further construction necessary.
“user state signal”	Indefinite	No construction necessary. Alternatively, “information about a user’s attentive state”

The intrinsic record provides no guidance as to what a “user state signal” is, or the scope of such term to one of skill in the art. This is not a term of art, and it does not have a plain and ordinary meaning. Betke Decl. at ¶ 51. The term, as used in the claims, is tied to “attention”: “processing the sensor signal to produce a user state signal... indicative of user attention....” Accordingly, because the term “attention” is indefinite— “user state signal” is also indefinite.

Plaintiffs do not proffer any construction for this term. They provide an alternative construction, however, of “information about a user’s *attentive state*.” (emphasis added). But, as noted with the term “attention,” the patentees used “attentive state” differently from “attention” so they cannot be merely swapped in the construction.

Moreover, in Plaintiffs’ opening brief, they highlight an embodiment that “employs an attentive user interface to switch automatically between cameras based on where the person on screen is looking.” Pltfs’ Br. at 13. Specifically, Plaintiffs state:

To do this, an attentive user interface linked to the cameras employs a sensor to detect the person’s attention, processes the information derived from the sensor to assess the person’s attention, ***then produces an electronic signal to switch between the cameras*** on the basis of that attention, taking the place of an off-screen producer. The latter signal, which consists of

information about the user's attentive state, is the "user state signal."

*Id.* (emphasis added). Importantly, Plaintiffs suggest that it is the latter signal, *i.e.* the "electronic signal to switch between the cameras" that is a "user state signal" in this embodiment. However, one of ordinary skill would understand that the "electronic signal to switch between the cameras" is a *control* signal, not a "user state signal," whatever the proper scope of that might be. Betke Decl. at ¶¶ 52-53.

Finally, Plaintiffs' argument that "user state signal" would be known to one of ordinary skill in the art is without support. Plaintiffs refer to the prosecution history and state, "in Pepper, Jr. as well as the patents in suit, the term 'user state signal' refers to information about the user's engagement with a device." Pltfs.' Br. at 14. As an initial matter, that a term is used in a prior art reference does not establish that it has reasonably clear scope in the context of the Patents-in-Suit. And in any event, U.S. Patent No. 4,302,011 to Pepper Jr. ("Pepper Jr.") does *not* actually use the term "user state signal" anywhere. Rather, in the excerpt that Plaintiffs cited from the prosecution history, the examiner was merely attempting to map the claim language to signals otherwise identified in Pepper Jr. Office Action, Aug. 21, 2012, '856 File History, at 2.

Accordingly, as the only use of the "user state signal" in the claims is defined with respect to the indefinite term "attention," the term "user state signal" is also indefinite.

**F. "notify/notification"**

<b><u>Term</u></b>	<b><u>Samsung's Position</u></b>	<b><u>Plaintiffs' Position</u></b>
notify/notification	"signaling or soliciting the user for consideration of an information event"	No construction necessary. Alternatively, "signaling or soliciting for a user's attention"

Properly construed, the term “notify/notification” requires communication of an information event. The first aspect of Samsung’s construction “signaling or soliciting the user” closely tracks the specification’s definition, and the parties do not dispute this language. ’665 patent, at 6:9-14 (“As used herein, the term ‘notify’ or ‘notification’ is intended to mean the signalling (sic) or soliciting, usually by a device, for a user’s attention”); Pltfs.’ Br. at 17-18.

The remainder of the construction, “for consideration of an information event” is supported by the specification at 9:25-50 and Figure 3, which illustrates how an information event forms the basis of a notification. The information event is an incoming message or a task requiring user input. ’665 patent, at 9:28-31.<sup>5</sup> One example of an incoming message would be an email. Thus, the claimed notification signals or solicits the user for consideration of this information event.

Plaintiffs argue, inaccurately, that Samsung’s construction reads out a preferred embodiment. The examples to which they point, however, are arguably user-initiated embodiments or ones which require user-initiated interaction. By contrast, Figure 3 and the specification of the ’665 patent at 9:28-31 clarify that the information event refers to the basis of the “device-initiated” operation, *e.g.*, the trigger which caused the device to notify a user of an incoming message or of a task requiring user input.

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<sup>5</sup> Plaintiffs’ position appears to be that if “information event” is in the claim, the Court will have to construe it and/or that it will read out “preferred embodiments.” Pltfs.’ Br. at 18. As to whether the Court will need to construe “information event,” Figure 3 and the supporting portion of the specification inform one of ordinary skill that an “information event” is the basis of the device-initiated communication which is unknown to the user. Betke Decl. at ¶ 58.

**G. “measure or index”**

Plaintiffs state in their opening brief that the parties agree that the “measure or index” must require “a value that identifies a quantity.” Pltfs.’ Br. at 15. In the interest narrowing the issues, Samsung agrees to Plaintiffs’ proposed construction: “a value that identifies a quantity.”

**IV. Conclusion**

Samsung’s constructions are firmly grounded in the intrinsic and extrinsic evidence. Although Samsung has endeavored to provide constructions for all the disputed term, several of the terms are indefinite as the record fails to provide any guidance, much less sufficient guidance, to reasonably ascertain the scope of the terms. Accordingly, the constructions and positions proffered by Samsung are correct and should be applied to the terms.

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Respectfully submitted,

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**CERTIFICATE OF SERVICE**

I hereby certify that on January 28, 2015, I electronically filed the foregoing with the Clerk of the Court for the District of Texas using the ECF System which will send notification to the registered participants of the ECF System as listed on the Court's Notice of Electronic Filing.

/s/ Cono A. Carrano  
Cono A. Carrano